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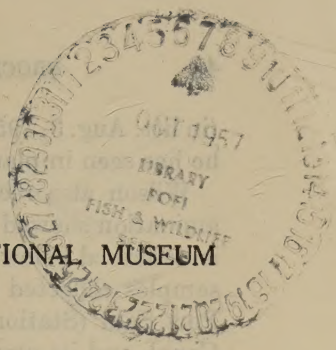

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A NEW SPECIES OF CALANOPIA (COPEPODA: CALANOIDA) FROM THE CARIBBEAN SEA

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The genus *Calanopia* (family Pontellidae) consists principally of Indo-Pacific species. Of the eight species now known, four have been reported only from Indo-Pacific localities: *C. aurivillii* Cleve, *C. herdmani* A. Scott, *C. sarsi* C. B. Wilson, and *C. thompsoni* A. Scott. *C. media* Gurney (1927) is known only from the Suez Canal. Although reported by C. B. Wilson (1950, p. 174) from *Albatross* Station 5186, off Panay Island, Philippines, *C. americana* Dahl appears to be restricted to the Atlantic Ocean. I have examined the Philippine specimens and have found them all to be *C. elliptica* (Dana).

Prior to the publication of Wilson's *Carnegie* (1942) and *Albatross* (1950) papers, *C. minor* A. Scott and *C. elliptica* (Dana) were known only from the Indo-Pacific. Wilson (1942) listed both species as present at *Albatross* Station 2396 (lat. 28°34′ N., long. 86°48′ W., Gulf of Mexico). The species of copepods in the sample from Station 2396 are entirely different from those in Wilson's list. No specimens of *Calanopia* are present in this sample, and none of the specimens of *Calanopia* in the U. S. National Museum collections were taken from this sample. Dr. Abraham Fleminger, who has made an extensive survey of the calanoid copepods of the Gulf of Mexico, informs me

(in litt. Aug. 3, 1955) that *C. americana* is the only species of *Calanopia* he has seen in plankton collections from the Gulf of Mexico.

Wilson also recorded *C. elliptica* from *Carnegie* Station 32. Examination showed these not to be *C. elliptica* but a new species, which is described below. Thompson and Scott (1903) found *C. elliptica* in samples collected in the Suez Canal and in the Mediterranean near Port Said (Station 37). Gurney (1927) did not find it in the Suez Canal, and its presence in the Mediterranean needs to be confirmed.

C. elliptica and *C. minor*, then, must be added to the list of species limited to the Indo-Pacific, while only two species, *C. americana* and the species from *Carnegie* Station 32 inhabit the Atlantic Ocean.

Illustrations of all species except *C. media* and *C. sarsi* are provided by A. Scott (1909) in his *Siboga* Expedition report. Pesta (1912) has provided a key to the females of these species.

Calanopia biloba, new species

FIGURES 1–3

Calanopia elliptica (Dana), C. B. Wilson, 1942, p. 172 (Caribbean specimens only).

SPECIMENS EXAMINED: 53 females, 46 males, 10 juveniles, collected in surface plankton tow, *Carnegie* cruise No. 7, Station 32, Oct. 5, 1928. Caribbean sea, lat. 15°18′ N., long. 68°11′ W., surface temperature 28.0° C., surface salinity 35.9 °/₀₀, bottom depth 4566 m.

TYPES: Holotype male, 1.55 mm., USNM 99506; allotype female, 1.67 mm., USNM 99507; 107 paratypes, USNM 80076.

DIAGNOSIS: Female closely resembling *C. elliptica* in most particulars, but the right and left fifth legs are of equal length (in *C. elliptica* the left leg is longer). Male urosome with two processes on right side of second segment. A conical process extends posteriad from the posterior margin; slightly anterior and dorsal to this arises an auricular process directed laterad. Fifth legs similar to those of *C. elliptica*, but left leg not reaching distal end of second segment of right leg (in *C. elliptica* left leg reaches well beyond distal end of second segment of right leg).

ADDITIONAL DESCRIPTION: FEMALE: Total length, excluding caudal setae, 1.65–1.67 mm. Metasome about 3.3 times length of urosome. Genital and anal segments nearly equal in length. Caudal rami about three-fourths as long as anal segment, more than three times as long as wide. First antenna 17-segmented, reaching back to about the middle of genital segment. Mouthparts and swimming legs 1–4 identical in number and arrangement of setae with those illustrated by Giesbrecht (1892) for *C. elliptica*.

MALE: Total length, 1.45–1.55 mm. Metasome 2.0–2.1 times length of urosome. First two segments of urosome subequal, third

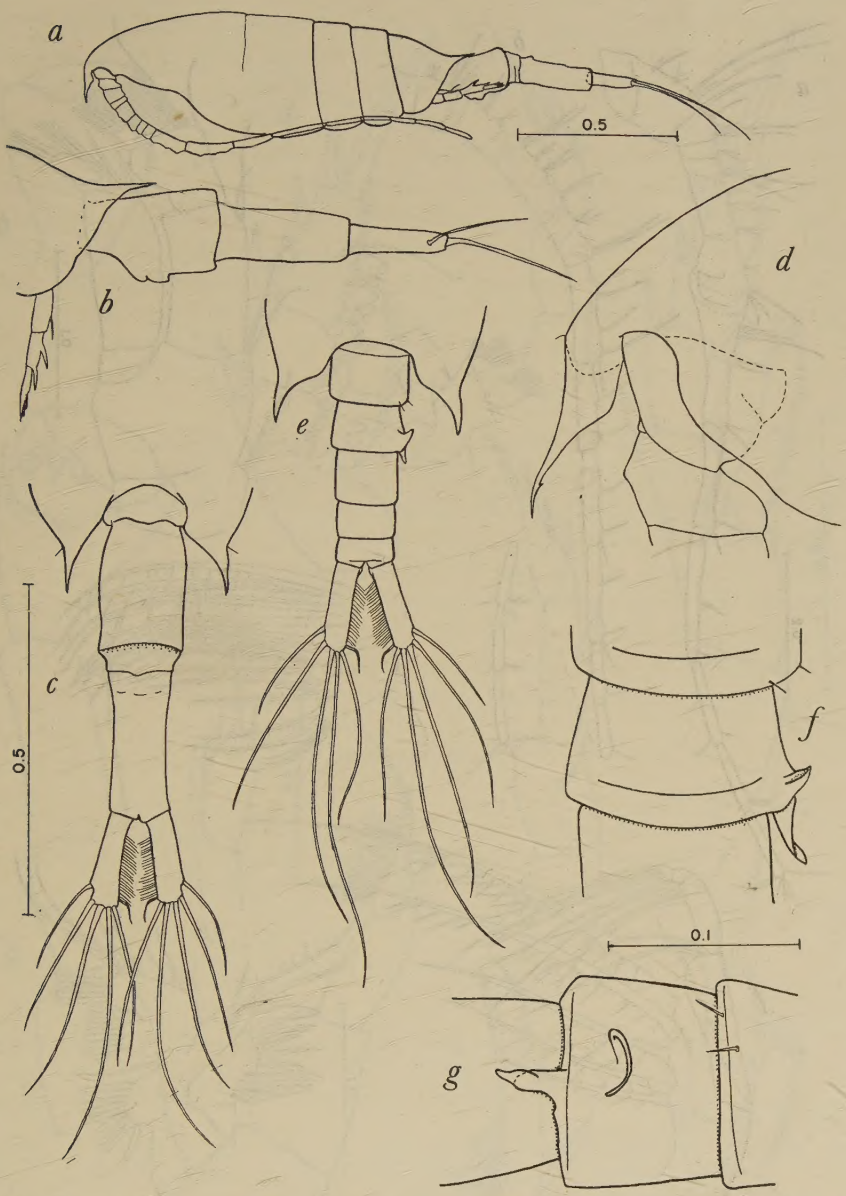

FIGURE 1.—*Calanopia biloba*, new species. *a–d*, Female: *a*, lateral view; *b*, last metasomal segment and urosome, lateral; *c*, same, dorsal; *d*, head, lateral. *e–g*, Male: *e*, last metasomal segment and urosome, dorsal; *f*, second urosomal segment, dorsal; *g*, same, from right side. Scales in mm., same for *b*, *c*, and *e*; same for *d*, *f*, and *g*.

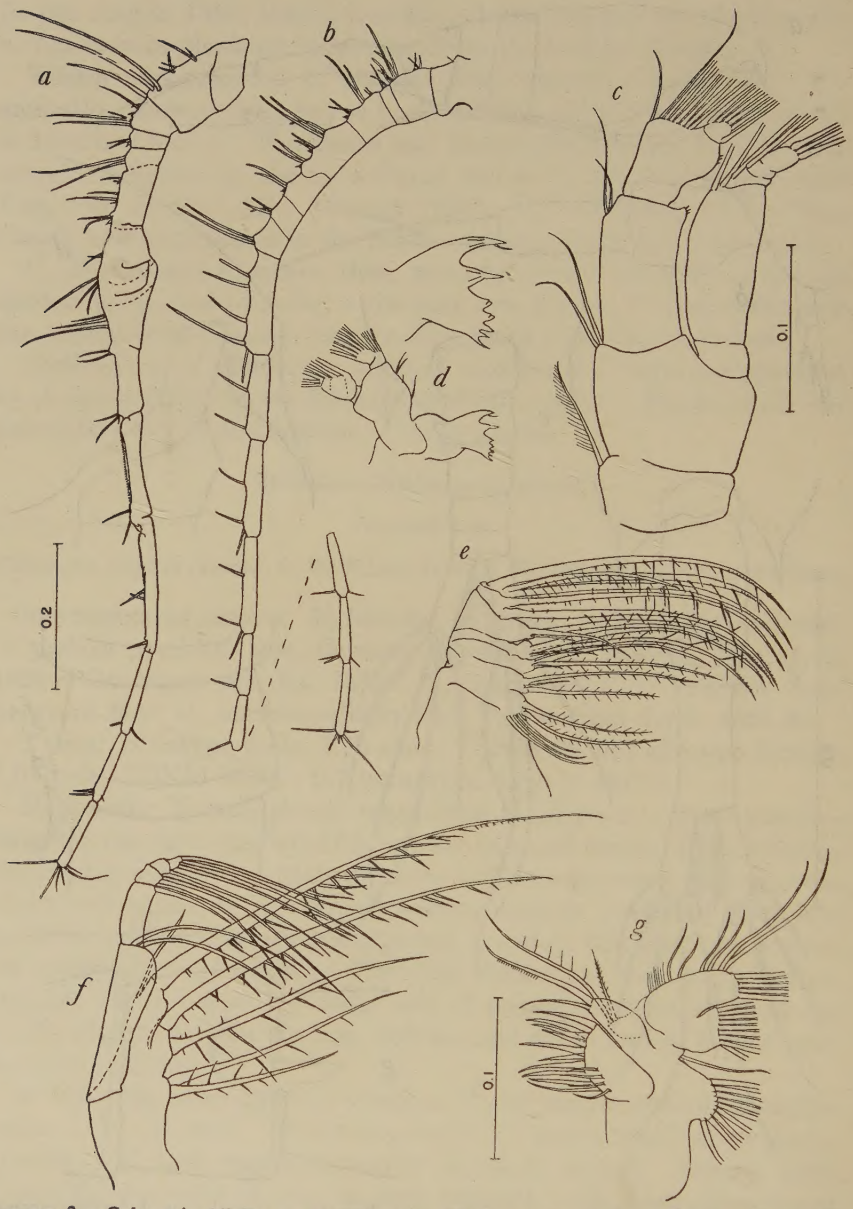

FIGURE 2.—*Calanopia biloba*, new species. *a*, Right antenna 1 of male. *b–g*, Female; *b*, antenna 1; *c*, antenna 2; *d*, mandible, with detail of gnathal lobe; *e*, maxilla 2; *f*, maxilliped; *g*, maxilla 1. Scales in mm., same for *a*, *b*, and *e;* same for *c* and *f;* and same for *d* (detail) and *g*.

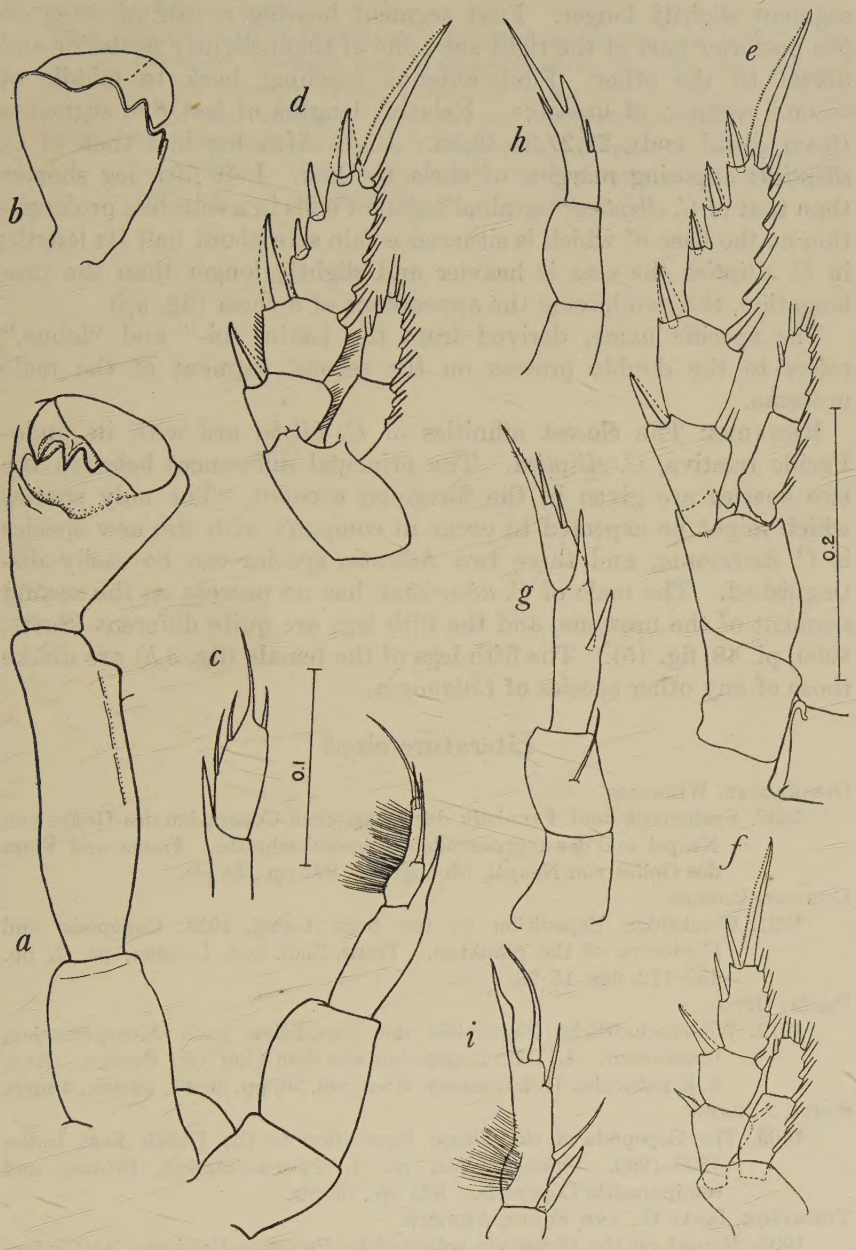

FIGURE 3.—*a–g, Calanopia biloba,* new species. *a–c,* Male: *a,* fifth legs, posterior surface; *b,* distal segments of right fifth leg, anterior surface; *c,* distal segment of left fifth leg. *d–g,* Female: *d,* second leg; *e,* fourth leg; *f,* first leg; *g,* fifth leg. *h, Calanopia americana* Dahl, fifth leg, female; *i, Calanopia elliptica* (Dana), distal segment of left fifth leg, male. Scales in mm., same for *a, b, c, g, h,* and *i;* same for *d, e,* and *f.*

segment slightly longer. First segment bearing a pair of setae on the posterior part of the right side, one of them slightly posterior and dorsal to the other. First antenna reaching back to middle of second segment of urosome. Relative lengths of last five segments (from distal end), 27,27,31,49,38. Right fifth leg like that of *C. elliptica;* opposing margins of chela toothed. Left fifth leg shorter than that of *C. elliptica;* terminal segment ends in a seta-like prolongation at the base of which is situated a thin seta about half its length; in *C. elliptica* the seta is heavier and slightly longer than the prolongation, the two having the appearance of a chela (fig. 3,*i*).

The specific name, derived from the Latin "bi-" and "lobus," refers to the double process on the second segment of the male urosome.

Remarks: The closest affinities of *C. biloba* are with its Indo-Pacific relative, *C. elliptica.* The principal differences between the two species are given in the foregoing account. The only species which might be expected to occur in company with the new species is *C. americana,* and these two Atlantic species can be easily distinguished. The male of *C. americana* has no process on the second segment of the urosome, and the fifth legs are quite different (Scott, 1909, pl. 48, fig. 15). The fifth legs of the female (fig. 3,*h*) are unlike those of any other species of *Calanopia.*

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